



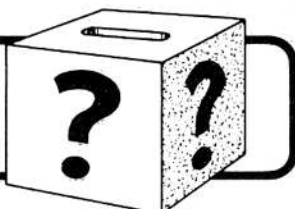
# NUCLEAR DIVISION NEWS

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 5 — No. 23

December 5, 1974

## QUESTION BOX



If you have questions on company policies, benefits, etc. or any other problems with which we might help, just let us know. Drop your inquiry to the Editor, **Nuclear Division News**. (Or telephone it in to your plant news representative.) You may or may not sign your name. It will not be used in the paper.

Questions are referred to the proper authorities for accurate answers. Each query is given serious consideration for publication.

Answers may be given to employees personally if they so desire.

**QUESTION:** Does the Company still give an employee and his guest a meal when he gets 25 years of service? I received my watch almost a year ago, but nothing has been said about a meal.

**ANSWER:** The recipients of 25-year service awards are recognized in various ways across the Division. Some, but not all, groups entertain the recipient at a luncheon. It is suggested that you speak to your supervisor to see what the custom is in your group and if there has been an oversight.

**QUESTION:** When the ORNL East Parking Lot was resurfaced, the "visitors only" section was expanded to include 17 of the most desirable locations. There is still no convenient place for visitors to park, however, since these spaces are all occupied by employees' cars. On a recent day, for instance, 14 of the 17 "visitors" drove cars registered in Anderson or Knox county. Eight of these cars had CCRP bumper stickers. Does the ORNL guard department plan to enforce its rules? If not, it might be better to remove the "visitors only" signs and allow honest employees to use these parking spaces.

**ANSWER:** ORNL receives more than 20,000 visitors each year; therefore it is apparent that there was a real need to enlarge the visitor parking area in front of Building 5000 (East Portal).

The recent repaving, relining, and other temporary construction work which removed many parking spaces from service in the parking lot resulted in some employees parking in the visitor area.

Now that the improvements to the parking lot are completed, ORNL will enforce the parking regulations. It is hoped and expected that everyone will cooperate in making it possible for the Laboratory to extend the courtesy of convenient parking for its guests.

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**QUESTION:** Why are monthly employees in the Purchasing Division required to work overtime without pay when overtime has been scheduled at the other plants with pay?

**ANSWER:** A similar question was answered in the **Nuclear Division News** on February 24, 1974. The answer at that time was:

"... exempt employees are expected to work a certain amount of overtime, if this is necessary to accomplish their assigned responsibilities. If only a limited number of exempt employees are involved, it is intended that some compensating

(Continued on page 8)

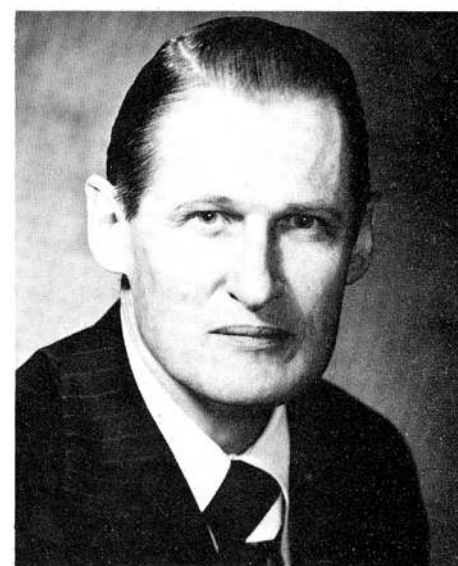
## Burch named to direct fast breeder program

The appointment of William D. Burch as Program Director of the Liquid Metal Fast Breeder Reactor (LMFBR) has been announced by Herman Postma, Director of Oak Ridge National Laboratory.

Burch, who joined ORNL in 1952, has returned to the Laboratory after his 15-month participation with Union Carbide at Uranium Enrichment Associates.

William E. Unger, who has served as acting director of the program for the last six months, will return to the Chemical Technology Division in his former role as Manager of Liquid Metal Fast Breeder Reactor research and development.

In his new assignment, Burch heads a program having a staff of about 35 persons. The objective of the program is to develop technology for reprocessing spent LMFBR fuel elements to recover plutonium so that it can be recycled back to a reactor and reused as fuel. The program is expected to entail the construction of a pilot-scale fuel reprocessing plant to reprocess spent fuel from the



William D. Burch

nation's first LMFBR demonstration reactor to be built on the Clinch River in Oak Ridge. The technology will be applicable to full-scale commercial plants expected to be built and operating by about 1995.

(Continued on page 8)



**CONGRESSWOMAN-ELECT VISITS** — Mrs. Marilyn Lloyd, who will represent the Third Congressional District of Tennessee in the next U.S. Congress visited the Oak Ridge National Laboratory recently. She views the Oak Ridge Research Reactor above. From left, are James A. Cox, Superintendent of Operations at ORNL; Mrs. Lloyd; Howard Elliott, her administrative aid for Oak Ridge, and Roger F. Hibbs, President of the Nuclear Division.

### NUCLEAR DIVISION SAFETY SCOREBOARD

Time worked without a lost-time accident through November 26:

Paducah . . . . .	112 Days	850,000 Man-Hours
ORNL . . . . .	106 Days	1,896,690 Man-Hours
ORGRP . . . . .	**20 Days	**367,000 Man-Hours
Y-12 . . . . .	532 Days	16,827,000 Man-Hours

\*\*A lost-time accident occurred at ORGRP on November 26.



## Coleman will serve on editorial board

Charles F. Coleman, assistant chief of the chemical development section, Chemical Technology Division at ORNL, has been invited to serve on the Editorial Board of the new journal, **Hydrometallurgy**.

**Hydrometallurgy** is an international journal which will cover all aspects of the aqueous processing of metals. It will be published in quarterly issues, one volume per year, the first of which is scheduled to appear early in 1975.

Editors of the publication are N.M. Rice of the University of Leeds, England, and G.M. Ritcey, Department of Energy, Mines and Resources, Canada. It will be published by Elsevier Scientific Publishing Company, The Netherlands.

The Editorial Board consists of an international team of prominent workers in the field of aqueous processing. Their principal function will be to support the general aims of the journal by encouraging the submission of good manuscripts, to offer advice on specific problems posed by the editor and to be prepared to referee papers falling within their field of interest.

Coleman joined the Nuclear Division staff in 1948. He earned a B.S. degree in chemical engineering from the University of Utah, and M.S. and Ph.D. degrees in physical chemistry from Purdue University. His appointment to the Editorial Board of **Hydrometallurgy** is for a two-year period.

### STATE-OF-LAB ADDRESS

The annual State-of-the-Laboratory address will be given Tuesday, December 17. Herman Postma, ORNL Director, will give the address at 8 p.m. Nuclear Division employees are invited to the Oak Ridge High School auditorium to hear the presentation.

## NUCLEAR DIVISION NEWS

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CARBIDE

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## 'A model is a tool . . . not a toy'

Scale model building is an art that goes far back in time and probably antedates the crudest engineering drawings. In our present day, it is an almost indispensable tool for designers in the construction and chemical industries.

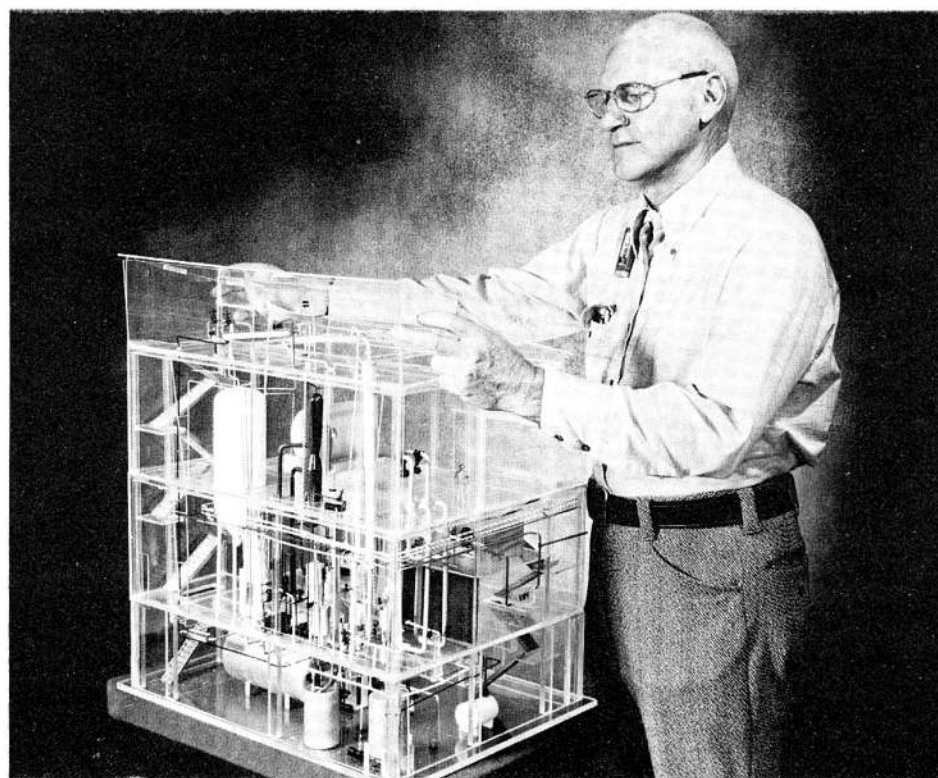
An operation as large and diverse as the Nuclear Division, with interests which range from uranium separation to study of human cell chromosomes, has its needs for scale models too. Long before ground is broken for some of the major engineering and construction projects, a scale model is prepared to provide the decision makers and various design groups with an idea of what the finished product will look like. Because of its added dimension of depth, it can be an even more effective tool for communication than a pictorial concept.

One of the masters at this art is Kenneth E. Smith, Nuclear Division Engineering at the Y-12 Plant. Smith, who has 24 years of company service, has a long list of models to his credit which includes projects carried out by the three Oak Ridge installations. Some of his models are: ORGDP uranium separation systems, ORNL thermonuclear experiments and the plutonium isotope laboratory, and Y-12 Plant machines, buildings and chemical processing facilities.

### Tool, not a toy

An engineering draftsman as well as being skilled with fabrication tools, Smith works from only very preliminary information to build and assemble his models. His tools include a drawing board and a variety of small power tools for cutting wood, metal and plexiglass. Typical models also contain cardboard, plastic and plaster of paris. Much of the materials used are salvaged scraps from the Y-12 Plant shops.

Smith believes in the importance of his work. "A model is a tool, not a toy," he said. "It enables our designers to uncover errors that are not readily apparent on two-dimensional drawings and enables them to make any necessary changes before the construction stage is



**MODEL BUILDING** — Kenneth E. Smith, Nuclear Division Engineering in Y-12, shows one of the plastic scale models he has designed. "It is easy to correct structural errors in plastic," Smith states. "It saves a lot of work later."

reached. It's a lot easier to change a piece of plastic in a model than pieces of steel during actual construction. Discovering just one small error during the design stage may save tens of thousands of dollars in field construction."

### Uses of a model

Smith also pointed out the value of a model in communicating an idea during the design proposal stage. "Some projects begin with an idea that has to be communicated to those persons who must make the final decisions. A model can help the decision makers to visualize how the completed plant, building, process facility or machine will look."

As might be expected, Smith also has his own woodworking shop at home in Oak Ridge. "After working with miniature objects all day at the plant, I like to make furniture and

cabinets at home."

He lives at 140 Lancaster Road with his wife Frances. They have three grown children.

## 18-year-olds still have to register

The Selective Service law requires that young men register with their area Selective Service Board not earlier than 30 days prior to their eighteenth birthday, and not later than 30 days after their birthdate.

Area Selective Service Boards all over the USA are operating on a standby basis since the cessation of the Vietnam crisis. This does not mean that the law requiring registration with the board at the proper age has been changed or voided.

Area offices are all over the USA, and if not in every community, there usually are volunteers who will help out. Registration can even be made by mail. All you have to do is write your area office for a "Mailer."

It is emphasized again that the Selective Service is not defunct, and law requires that all men must register at age 18. Nothing has changed except that the boards are operating on a stand-by basis.

### FORMER ORGDP OPERATOR

Ed J. Shudan, of Route 3, Lenoir City, died November 8 at his home. He retired from ORGDP in the early 1960s. Mr. Shudan is survived by his wife, Lucille Coppock Shudan, a daughter, Mrs. Clark Whitaker, Lenoir City; three grandchildren; and an uncle. Funeral services were held November 10 in the Click Funeral Home Chapel, Lenoir City, with the Rev. Ben Hagie officiating. Burial was in Hickory Valley Cemetery.



**TAT STUDENTS VISIT ORNL** — Twenty-six students and two instructors from the Training and Technology Program at the Y-12 Plant visited the metallurgy laboratory in the Metals and Ceramics Division at ORNL. They observed research and development techniques in nondestructive testing, mechanical testing and metallurgy.



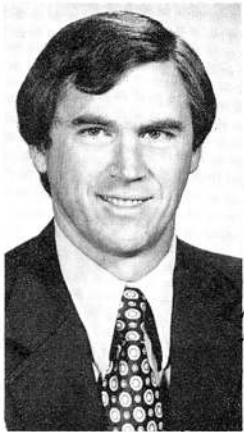
### Savings Plan—Personal Investment Account

Recent unit values:

	Fixed Income Fund	UCC Stock	Equity Investment Fund
July 74	10.70	39.85	7.03
August 74	10.77	42.00	6.26
September 74	10.85	38.41	5.43
October 74	10.92	38.41	6.69

Note: Fixed Income Fund unit values reflect interest additions to achieve the guaranteed effective annual interest rate of 7-3/4% for 1974. Union Carbide stock values are the average cost of stock purchases during the month plus brokerage charges. Equity Investment Fund unit values represent the month-end market value of securities held by the Fund. Dividing the total value by the number of units in the fund establishes the month's unit value - and the price at which new units are added that month.

## Damewood named safety engineer



Damewood

William H. Damewood Jr. has been promoted to safety engineer in Y-12's safety department.

Damewood, a native of Knoxville, received his B. S. degree in personnel management from The University of Tennessee. He worked with Foote Mineral Co., and with Dempster Brothers, Knoxville, prior to joining Union Carbide approximately six months ago.

Mrs. Damewood is the former Roberta Barnes, and they have two sons, James and Jeffrey. Their home is at 740 Schenley Road, Knoxville.

## Division Deaths

Donald N. Cantwell, a maintenance mechanic at the Oak Ridge Gaseous Diffusion Plant, died November 14, in Ft. Sanders Presbyterian Hospital, Knoxville.



Mr. Cantwell

Mr. Cantwell had worked intermittently at ORGDP since 1945, but was last hired in 1950.

Mr. Cantwell is survived by his wife, Betty, Route 2, Lenoir City; two sons, Jimmy Cantwell of Knoxville and the Rev. Donnie Cantwell of Winchester, Va.; father, James T. Cantwell; seven sisters; and five brothers.

Funeral services were held November 17 in the chapel of Weaver Funeral Home with the Rev. Donnie Cantwell officiating. Burial was in the Bethesda Cemetery in Morristown.

### ORNL RETIREE

Samuel H. McReynolds died November 20 in a Knoxville hospital. Mr. Reynolds worked as a millwright at ORNL until his retirement in 1971. The family resides at Route 5, Lenoir City.

## Aebischer joins UCC-ND's public relations department

Two major appointments have been made to the public relations staff of the Nuclear Division.

Edward D. Aebischer, who has been Manager of Technical Information and Publications for Project Management Corporation in Knoxville, has been named Associate Director of Public Relations with primary responsibilities at the Oak Ridge National Laboratory.

David A. Sundberg, who has been information officer at the Laboratory, will be an Assistant Director of Public Relations with principal responsibilities in the publications field.



Aebischer

Sundberg

### Wisconsin native

Aebischer has a broad background in public relations. He has served as public information officer and assistant to the director, Office of Information, National Academy of Sciences, and was Director of Public Information for the Kitt Peak National Observatory, Tucson, Ariz. From 1968 to 1973 he was head of information services for Oak Ridge Associated Universities.

A native of Eau Claire, Wisc., Aebischer received his bachelor's degree in physics from St. Olaf College, Northfield, Minn., and his master's degree in journalism and mass communications from the University of Wisconsin.

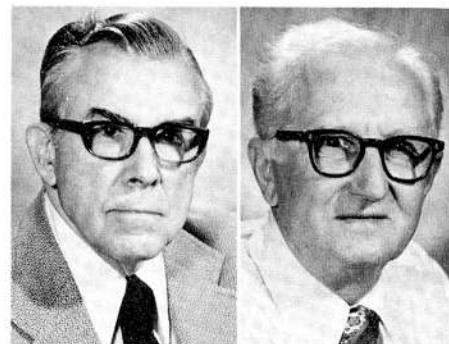
He is a member of several professional organizations, including the National Association of Science Writers and the Society of Professional Journalists.

### Served on periodicals

A native of Longmont, Colo., Sundberg received his bachelor's degree from the University of Colorado. He was a member of the public relations staff of the Los Alamos Scientific Laboratory from 1961 to 1965 where he served as editor of *LASL News* and established "The Atom," a monthly magazine for employees.

From 1965 to 1967, Sundberg was a member of the staff of the American Nuclear Society where he served as editor of "Nuclear News." He joined the staff of the Oak Ridge National Laboratory in 1967 where he established and was the first editor of "ORNL Review," a quarterly employee magazine. He has been active in the Nuclear Division's public relations program for the last seven years.

## Division Retirees



Hargrove

Farthing

Two Paducah employees retired last month from the Plant Services Department. Horace B. Hargrove Jr. and Abner C. Farthing. They share the same birthday, along with a mutual retirement date.

Farthing, a native of North Carolina, joined Union Carbide after working with Stone & Webster. He and his wife, Mary, live on Blandville Road in Paducah.

Hargrove joined the Paducah Plant in 1953, and is a native of Graves County, Ky. He and his wife, Louise, live on South 19th Street in Paducah.

### PATENTS

To Floyd M. Glass, ORNL, for "Magnetic Self-Latching Pressure Switch."

To Theodore R. Mueller, ORNL, and Dale J. Fisher, Gainesville, Fla., for "Automatic Controlled-Current Coulometric Environmental Monitor."

To John H. Thorngate and Phillip T. Perdue, ORNL, for "Stable Pulsed Light Source."

## Commendations to four

The American National Standards Institute and the Nuclear Technical Advisory Board recently presented letters of commendation to William F. Ferguson and Fred L. Hannon, Nuclear Division Engineering; A. Dixon Callihan, a retired Nuclear Division employee; and Joe W. Anderson, a former employee, who now works for Project Management Corporation.

Anderson was chairman of the Practices and Procedures Committee, of which Hannon was a member. Ferguson and Callihan served as members of the NTAB Priorities Committee. The men were commended for their "efforts in promoting the development of high quality national consensus standards for the nuclear industry."

Of the 11,000 individuals participating in the ANSI-NTAB Program, only eight received letters of commendation in 1974.

### FORMER ORNL EMPLOYEE

William F. Wenger, formerly a carpenter in the Plant and Equipment Division at ORNL, died November 14 in a Knoxville hospital. He worked at ORNL from January, 1959, until he received a disability termination in 1972. Mr. Wenger's family resides at Route 1, Concord, Tenn.



**NEW OFFICERS** — The East Tennessee Chapter of the Society for Technical Communication enters its second year. Current membership includes personnel from all three Union Carbide installations in Oak Ridge, from the Technical Information Center of the Atomic Energy Commission, from ORTEC, Inc., and from Barber and McMurtry Architects. Sitting from left, are Lola Byrd, ORGDP, treasurer; and Jane Kimbro, Y-12, secretary. Standing are Andy Denny, Y-12, president; Craig Whitmire, Y-12, past president; and Joe Deatheridge, ORNL, vice president.



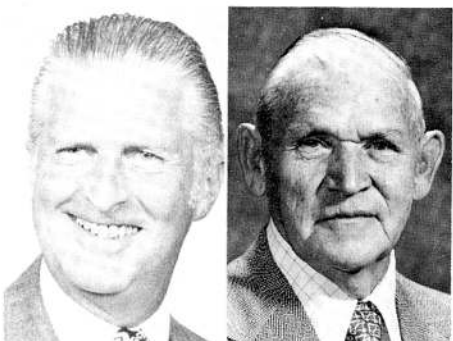


## Division Retirees



Farabee

Metcalf



Parker

Summey

Four ORNL employees retired December 1. Their combined company service gave them an average of over 27 years each.

Lawrence B. Farabee was a research associate in the Health Physics Division. He retired with 29 years of company service. Farabee and his wife, Margaret, reside at 104 Oklahoma Avenue, Oak Ridge. They have three children, all of whom are attending college.

Richard P. Metcalf was an information center specialist in the Information Division. He came to work at ORNL on October 22, 1946. He and his wife, the former Margaret Hobbs, have three children. They reside at 346 East Drive, Oak Ridge.

Clarence L. Summey was a stores attendant in Finance and Materials. He retired with over 31 years of company service. He is married to the former, Fannie Silvey. They have four children. One of them, Joanne Sanford, is employed at ORNL. The Summey home is at Route 27, Emory Road, Fountain City.



Honeycutt

George D. Honeycutt is retiring at the end of December from ORGDP's Plant Protection and Security Division. He has been with Union Carbide since May, 1944. His home is at Parkview, Route 4, Rockwood.

### PATENTS Granted

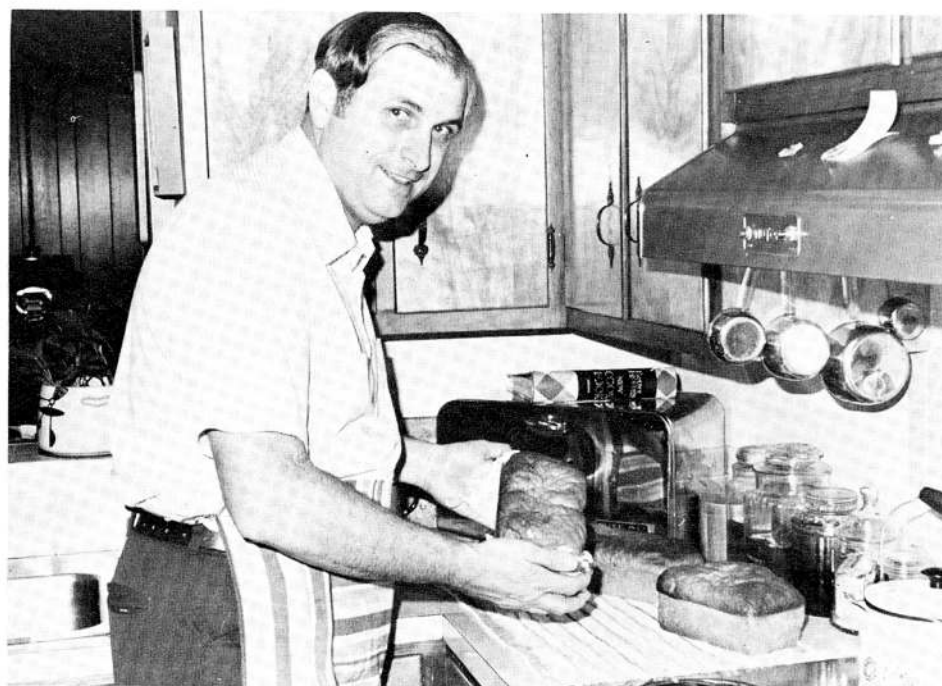
To James T. Tidwell and Eugene H. Bradburn, both of Y-12, for "Brazing Alloy."

To David R. Masters, Y-12, and William B. Malthouse, ORNL, for "Improved Syntactic Foam."

To James A. Martin, Y-12, and W. Reneau Dubberly, formerly of Y-12, for "An Improved Method of Part Support for Machining Operations."



ORNL HONORED — Associate Director Alexander Zucker accepts a plaque from President James R. Lawson at the Fisk Institute Silver Jubilee Banquet. The plaque gave special recognition to ORNL for its many contributions to Fisk University and to the Fisk Institute, through the work of Henry W. Morgan and Percy A. Staats of the Physics Division. Both men have significantly contributed to the development of spectroscopy research and instruction at Fisk over the past 18 years.



**LARSON SPECIALTY** — In Paducah, nobody makes better Swedish rye bread than PGDP engineer Gene Larson, as his numerous fans will testify. If you want to try your hand at this Swedish treat, see the recipe.

## Paducah's Gene Larson masters 'Swedish' dishes

To his professional associates at the Paducah Plant Gene Larson of the Engineering Division is noted for his abilities as a project engineer. In private life, he is known as a master chef of Swedish culinary treats and one of the authors of a privately published volume called "The Larsons' Favorite Recipes."

Larson explains that he grew up watching two master chefs at work, his parents. "Both mom and dad specialized in Swedish cooking, using recipes handed down from their parents who came to America from Sweden in the 1800's. My dad, a minister, specialized in meat dishes, while my mother was best in breads and pastries. I also learned a little bit about breads by working at a Swedish bakery near our home in Kansas City. After I got married, I decided to try my hand in the kitchen to see if I could duplicate the dishes my parents used to make."

At a family reunion some years ago, Larson, his parents and six brothers and sisters decided to compile a book of recipes which they had been taught from early youth, had created on their own or had derived from other sources. They reasoned that this would be a way of preserving the family cooking traditions just as some families compile a history of ancestors.

"All of us contributed recipes and dad did the compiling and editing," he said. "When we had finished, we had over 200 recipes. Some are extremely old, while others are of more recent vintage. We assembled some 225 copies of the book and all the brothers, sisters, cousins, etc., received multiple copies. A few went to friends. The books went so rapidly that I now lack one for my youngest daughter."

Although Larson has a long list of dishes in his repertoire, the most requested specialty apparently is Swedish rye bread from his mother's favorite recipe.

"Between Thanksgiving and Christmas each year I bake about 15 loaves

every weekend, which we give away to neighbors and friends. I set the dough on Friday night, just before turning in. The next morning I work it into loaves, let it rise for several hours and then place it in the oven. Following the recipe precisely doesn't necessarily guarantee success. The dough has to feel just right, which may mean adding a pinch more flour. The weather, temperature and humidity affect the dough mixture too. The bread bakes and usually is ready by Saturday afternoon. The recipe makes three to four large loaves, or six to seven medium size loaves."

Following is the Larson recipe for Swedish rye bread, along with the hope that you too can develop the mysterious "feel" which apparently transcends the use of recipes.

### "MOM'S" SWEDISH RYE BREAD

**Sponge:** 2 pkg. granulated yeast into 1/4 cup warm water. Take 1 cup warm water and add 1/2 teaspoon salt, 1 teaspoon sugar and add this to the yeast. Beat in 2 cups white flour. Beat well and then let stand in warm place until it gets bubbly (about 30 minutes).

**Bread mixture:** Into 2 cups of warm water add 2 cups rye flour, 1 teaspoon salt, 3/4 cup molasses (dark molasses rather than sorghum), 1 cup white sugar, 1 cup brown sugar, 3/4 cups shortening. (Use a large bowl or dishpan.) Stir until well mixed. Add 1 teaspoon anise seeds which have been boiled in 1/4 cup water. (If desired, omit anise seed and add 1/2 cup or more of cut up candied peel.) Add the sponge. Mix well. Add white flour until dough will not stick to hands. Knead well. Let rise until size doubles. Make into loaves. Again let it rise. Bake at 400 degrees for 10 minutes. Then turn heat down to 325 degrees for 30 more minutes. Pull loaves from oven and butter crusts. Let cool before cutting. (If bread has baked through it will sound hollow when tapped on bottom.)



## COMPANY Service

20 25 30

### ORNL 30 YEARS

John T. Leslie, Athel R. Ferrell and Joseph E. Brandon, Plant and Equipment; Claude E. Guettner, Nette G. Crowe and Lester E. Lebo, Biology; Warren R. Grimes, Chemical Technology; Augustine N. Smith and Margaret H. Wilson, Reactor; and Jess Ledford, Operations.

### 25 YEARS

Wallace L. Hylton.

### 20 YEARS

Eddie L. Evans, James O. Williams, Homer D. Adkins, Charles W. Benson, Lyman R. Brasier and Vernon T. Carmony Jr.

### Y-12 PLANT 30 YEARS

Willie T. Cale, Maintenance Division; Clifford R. Stiles, materials forming; George R. Peterson and Allen B. Townsend, Development; John A. Stewart, Beta-2 chemistry; Fred W. Harmon, Engineering; and Ralph L. Johnson, guard department.

### 25 YEARS

Tom W. Stinnett and Samuel T. Shultz.

### 20 YEARS

Onva K. Clotfelter, Fred Marshall, Don R. Carr, Marion R. Nations, Billy R. Lundy, Raymond C. Glandon, Charles E. Foster, Ernest D. Freels, Harold L. Goldston, William C. Smith and Ervin R. Mantooth.

Robert E. Symons, Ben M. Rutherford, Joe H. Hamilton, Jim G. O'Kain, Merle R. Emery, John S. Wilson, Billy D. Cantrell, George M. Martin III, Hubert R. Cannon, Thomas E. Buckner, John A. McCall and Emery W. Mahan.

Jack J. Miller, Gilbert L. Carson, Lawrence E. Kinkaid, Samuel B. McSpadden, Walter A. Dossett, Jack C. Thompson, Sheila C. Rowan, George W. Holbert and George R. Myers.

### ORGDP 30 YEARS

Hubert A. Sutton, mechanical services department; Sanders H. Jones, chemical and general field maintenance; Charles E. Sellers, power and utility maintenance; Paul W. Hurst, Bruce P. Holbrook and Luther R. Pack, chemical operations administration; and Julius Foster, engineering.

### 20 YEARS

Hugo K. Hughes.

### GENERAL STAFF 30 YEARS

Rubye P. McCloud, nuclear materials management and accounting; Sarah V. Swanner, Computer Sciences Division and Helen L. Hogan, General Accounting.

### 20 YEARS

Robert B. Meyers Jr., Charles W. Nestor Jr., and Carroll P. Coker.

## WANTED



### Y-12 PLANT

RIDE WANTED from Sharp Street, North Clinton to Central Portal, straight day. Mary Bass, plant phone 3-7428.

JOIN CAR POOL from Fox Fire Garden Apartments, Merchants Road, Knoxville, to East or North Portal, 8 a.m. shift. Denzil Rockwell, plant phone 3-5424, home phone 688-1618.

### ORGDP

RIDE or WILL JOIN CAR POOL from East Drive, Outer Drive, California Avenue area to Portal 6, day shift. C. E. Goodman, plant phone 3-9645, home 483-3878.



A. Keith Yancy, fire and guard captain at the Paducah Gaseous Diffusion Plant.

## PGDP employee to receive degree from 'University without walls'

All his life, A. Keith Yancy, a fire and guard captain in the Employee Relations Division at the Paducah Gaseous Diffusion Plant, has dreamed of graduating from college. Next summer, his dreams will be realized. He will don his cap and gown and march up with the other seniors at Stephens College in Columbia, Mo., to receive his bachelor's degree in personnel management and administration.

This accomplishment will be due to Yancy's determination and a new educational program called the "University Without Walls."

Yancy received an associate degree from Eastern Kentucky University and attended the Paducah Community College. For 21 years he worked for the Paducah Police Department. During that time, he received training at the FBI Academy, Washington, D.C., and the Southern Police Institute of the University of Louisville. About five and a half years ago, Yancy joined the plant protection department at PGDP.

Although Yancy had attained over 100 hours of college credit over the years, it was scattered in several institutions.

### Alternate educational approach

The University Without Walls program is an alternate approach to traditional, liberal education. In addition to Stephens, over 30 other colleges and universities throughout the United States now have such a program.

Some of the concepts under which the program operates are: (1) no body of knowledge is so absolutely necessary as to be indispensable; (2) no two students have the same background, abilities, talents and goals; (3) learning takes place in many ways and in many places; (4) learning occurs in terms of the learner's goals, not those set by institutions; (5) the crucial factor in learning is recognition of the relationship between experience and knowledge.

The UWW program enables people like Yancy to pull together their for-

mal education, experience and training, and apply them toward a bachelor's degree in a given field.

### Program requirements

Requirements for the program include: completion of a personal inventory form, submission of high school and college transcripts, submission of three letters of recommendation, and approval of the candidate by the UWW Committee. Requests for credits in recognition of experiences must be made, and documentations provided. Programs are tailor-made for each student, depending on the goals chosen.

Students enter the program by way of a Common Seminar. This is a two-week orientation program for self-assessment, program planning and becoming familiar with UWW concepts and ways of working. This seminar is usually held on the campus of the participating college, but may be held off campus if a significant number of students are participating.

The Common Seminar is the only required course a student takes in the UWW program. Other courses are determined by the students and their advisors in accordance with their field of study.

### Yancy gets maximum credit

The credit to be granted a student is decided by the UWW Committee after the required documents have been submitted. Yancy was granted the maximum credit of 97.5 hours. A degree in personnel management and administration requires 120 hours, so Yancy is currently working on the additional 22.5 hours he needs. He is doing this through correspondence with his faculty advisor at Stephens College, Dr. Sue Coats. Since he attended the Common Seminar last fall, he has completed five more hours toward his degree, working at a pace he set for himself.

At age 50, Yancy can hardly believe that he's "almost there." One thing for sure, he will be one of the proudest graduates of Stephens College's class of '75.



**QUALITY ASSURANCE IS NAME OF GAME** — High-integrity electroplated nickel coatings are required on steel parts for protection against a highly corrosive atmosphere in the gaseous diffusion process. All plating, whether performed in-house or by vendors, is subjected to inspection in accordance with the job specification. Here, Jeff Vandeven, a mechanical inspection supervisor at the Paducah Plant, performs a flame test to check the adherence of the plating to the base metal.



# RECREATIONOTES

## ORGDP Holiday Happening

**OAK RIDGE CIVIC CENTER  
DECEMBER 21, 1974**

FOR YOUR DANCING PLEASURE 2 GREAT BANDS  
**THE DICK JONES BAND AND "THE NIGHT SHIFT"**

**SOCIAL HOUR 8:30-9:30 PM**  
CHRISTMAS CHEER & HORS D'OEUVRES  
**DANCE 9:30-12:30 AM**

**\$5.00 PER PERSON**  
LIMITED TICKET SALES  
NO RESERVED TABLES

*Safe Holidays are Happy Holidays*

## Application for Tickets To Christmas Parties

FOR CHILDREN OF OAK RIDGE UNION CARBIDE EMPLOYEES  
(AGES TWO-10 ONLY)  
**MONDAY, DECEMBER 23**

Plant .....

Employee's Name ..... Badge No. ....

Home Address .....

Plant Address .....

Number of Tickets (Children).....

Number of Tickets (Adults).....

— CHECK TIME PREFERRED —

Monday, December 23 9 A.M. .... 11 A.M. .... 1:00 P.M. ....

Only 3:00 P.M. .... 5:00 P.M. ....

Please check first and second choice (write in space "1" or "2") as only a limited number of tickets will be issued for each party. Preference will be given early applicants and if tickets for first choice are exhausted, tickets for second choice will be issued.

Return this form, properly and completely filled in, to the Carbide Recreation Office, Building 9711-5, Stop 1, Y-12 Plant. Please apply for tickets before December 18. The required number of tickets will then be mailed to parents at their home or plant addresses.



**BEST OF SHOW** — The color slide by John Maxwell was the best of show in the Carbide Camera Club salon. The all-blue slide was voted the best of pictorial slides as well.

**Y-12 BOWLING**

The Rounders and Rollmasters battle it out for top slot in the C League, with the Rounders holding a scant one-half point edge.

The Eightballs hold a four-point lead in the Classic League, as half time draws nigh. The Classic League rolls at 5:45 p.m. each Thursday, and needs a team for the last half of the season. Just give Recreation a ring at extension 3-5833.

The Rollers have assumed the lead in the Y-12 Mixed League, a point away from the Alley Cats.

**HOLIDAY HAPPENING**

Tickets are available all over the plant for the big Holiday Happening planned by ORGDPers. The happy hour begins at 8:30 and dancing gets underway at 9:30, Friday, December 21. Dick Jones' band and the Night Shift will provide the special music.

**CHRISTMAS KIDS' PARTIES**

The annual Christmas Party for children of Paducah Plant employees ages, two through 12, is set for December 14 at 9 a.m. at the Arcade Theater in downtown Paducah. Doors will open at 8:30. Ticket applications should be sent to the Recreation Department, PAX 324 or Bell 368. (Applications have appeared in the last two issues of **Nuclear Division News**.)

Union Carbide children in the Oak Ridge area, ages two through 10, will be feted in parties December 23 at the Oak Ridge High School. (An application appears in this issue.) There are five set . . . at 9 and 11 a.m., and at 1, 3 and 5 p.m. Since tickets go on a "first come-first served basis," it is better to get an early application in. No tickets will be mailed out after December 18.

**ORNL BOWLING**

In the A League, the Woodchoppers take a 22-point lead, pulling away from the crowd.

The C League belongs to the Damagers, inches ahead of the Remkeys and Pin Heads. B. Alenskis rolled high recently to take individual honors.

In the ORNL Ladies' League, the Pickups dominate action yet.

The Untouchables have moved up to tie with the Oops for the top spot in the Carbide Family Mixed League. George Reece and Elaine Griffies were individual stars recently.

**ORGDP BOWLING**

The Payoffs hold a scant lead in the ORGDP Women's League, as the Uptowners, Bowlettes and Wood Bees take control of second place collectively. Jennie Jackson's 213 scratch, 254 handicap game was high recently . . . and she topped out with a 637 handicap series.

The Tuesday League still belongs to the All Stars, as the City Slickers threaten. Sewell Brown posted a 231, 239 game recently.

The Mix-Ups edge out front in the Wednesday League, only a breath ahead of the Planners. Gene Epps rolled a 250 handicap game recently, and Sam Turner rolled a 507/669 series!



**LIVING IT UP** — Even the rains failed to dampen the spirits of employees and their families attending ORNL's Information Division's annual picnic. Highlights of the event, which was held at Clark Center Recreation Park, were a dunking machine, folk singing, an auction and door prizes.



**PORTRAIT WINNER** — The prize-winning portrait of the current Carbide Camera Club salon was "Meta Revisted" by Terry Domm. The portrait was done in black and white.



# The Medicine Chest

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning their health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 20, or call the news editor in your plant, and give him your question on the telephone.)

By T. A. Lincoln, M.D.

**QUESTION:** "In your recent article on cancer of the prostate, you mentioned the importance of zinc in the diet. How does one increase his zinc intake? What foods are particularly high in zinc content?"

**ANSWER:** White sugar, pears and citrus fruits are low in zinc, containing less than one part per million.



In ascending order of content are tuber vegetables such as potatoes and rutabagas, white flour, milk, leafy vegetables, meat, fish, eggs, whole cereals and nuts. The highest content is found in bran, which contains 40-120 parts per million. Wheat germ and oysters are also high. Considering the high zinc content in the prostate and seminal fluid as well as the importance of adequate zinc for normal puberty, one might wonder if the recommendation to the new groom to eat lots of oysters may have some scientific support! Unfortunately, it probably doesn't. Physiology and nutrition are not that simple!

**QUESTION:** "In your article on September 5, you stated that copper in the blood tends to depress the zinc level. In the *Oak Ridger* recently, a U.T. House Call article emphasized the greater importance of copper in the system. Is there a happy balance, or are we faced with a choice of having heart trouble or cancer of the prostate and less sexual activity?"

**ANSWER:** Fortunately, significant zinc or copper deficiency due to diet alone is probably rare in this country. The influence of marginal serum or tissue levels due to poor diets is not yet fully understood. Most cases of zinc deficiency are due to intestinal malabsorption, cirrhosis of the liver, and other severe chronic diseases. In other countries, and perhaps occasionally in the United States, young people who eat clay may develop a deficiency. The clay contains a chelating agent which binds the metal and prevents its absorption from the intestine.

Copper deficiency may occur in infants if they are fed solely on milk for long periods. Copper is found in relatively large amounts in shell-fish, shrimp, nuts, legume vegetables, cocoa and many meats. Many cooking vessels are made of metals which contain copper so materials

cooked in them absorb copper from the cooking water. In general, serious copper deficiency occurs primarily during chronic diseases or in infancy and childhood when a dietary deficiency is relatively much more important. There probably only needs to be concern about the depressive effect of copper on zinc when the intake of copper is extremely high and the intake or absorption of zinc is low. Most people who eat a balanced nutritious diet and are otherwise healthy, have no reason to be concerned about the zinc-copper inter-relationship.

**QUESTION:** "Should one do something to treat a bad bruise? Are there any dangers associated with a bruise?"

**ANSWER:** Immediately following a bad bruise, a cold compress or ice pack is the best treatment. Occasionally a bad bruise can cause the local accumulation of a pool of blood in the muscle or subcutaneous tissue, called a hematoma. It can cause considerable pain and rarely may become infected. Occasionally it is necessary to drain the accumulation of blood with a syringe and large gauge needle. Great care must be taken to avoid infection. When the bruise is subcutaneous, there is no reason to expect any long-term problems. There will be the usual black-and-blue area, followed by a yellowish discoloration, which gradually fades. When a muscle is bruised, the pain and tenderness may last much longer and are related to the use of the muscle. Bone bruises are usually confined to the bone surface, the periosteum, but can cause prolonged pain and tenderness. Enzymes are sometimes used to hasten the breakdown of the blood in the tissue, but they are not needed for the average bruise.

**QUESTION:** "Why isn't sputum cytology used to detect cancers of the larynx, throat and mouth?"

**ANSWER:** It is. During the collection of sputum, cells shed from the larynx or throat are often included and, if malignant, can be identified. Normally cellular material from the mouth is avoided but occasionally these cells can also be identified.

## ENERGY CONSERVERS

Make sure exterior doors, doors leading to unheated areas, storm doors, and windows are weather stripped or tightly sealed.



**VISIT REHABILITATION CENTER** — Oak Ridge Gaseous Diffusion Plant employees put profits from last year's dance to good use recently. Plant Manager Robert A. Winkler, left, presents Steve Brody, director of the Daniel Arthur Rehabilitation Center, a check, as they observe students at the center in the therapeutic pool. Lee Porter, ORGDP chairman for the 1974 United Way also looks on in the center. Percentage-wise, ORGDP led the three Oak Ridge Nuclear Division plants in UW giving for 1974. Their check to the center was over and above their UW contributions.

## Calendar of EVENTS

### TECHNICAL December 10

Solid State Division Seminar: "Magnetic Excitations in Praseodymium Studied by Inelastic Neutron Scattering," Jens Houmann, Danish Atomic Energy Research Establishment, Denmark. Conference Room Building 3025, 10 a.m.

Analytical Chemistry Division Seminar: "The Role of the Analytical Research and Services Section at the Pittsburgh Energy Research Center," Hyman Schultz, Analytical Research and Services Section, PERC, Pittsburgh. East Auditorium, Building 4500N, 9 a.m.

### December 12

Solid State Division Seminar: "Tritium Technology for Controlled Thermonuclear Reactors," J. S. Watson. Conference Room, Building 3025, 3 p.m.

### December 13

Fusion Reactor Technology Bi-monthly Colloquium: "Reflections on the Fusion Reactor Technology Program in the USSR," D. Steiner; "USSR Materials Technology for Fusion Reactors," J. A. Horak; "Status of ORMAK," R.J. Colchin; and "Comparison of the Cross-Section Sensitivity of the Tritium Breeding Ratio in Various Fusion-Reactor Blankets," R.T. Santoro. East Auditorium, Building 4500N, 9 a.m.

### December 16

Analytical Chemistry Division Seminar: "Computer Control of Experiments," G. M. Heiftje, Indiana University. East Auditorium, Building 4500N, 9:30 a.m.

## UW pledges will up county totals

The 1974-75 United Way campaign in the Nuclear Division has been extremely successful by any means of measurement. Nuclear Division employees pledged a total of \$440,277 to the campaign, an increase of \$73,506 over last year. This sum is a 20 percent increase over 1973-74.

In addition, Union Carbide Corporation has contributed \$15,000, which runs the combined total to \$445,277.

The Oak Ridge Gaseous Diffusion Plant achieved approximately 116 percent of its goal by pledging \$116,114. The Y-12 Plant pledged \$150,758, which was 106 percent of its goal. Oak Ridge National Laboratory raised \$156,431, which was 96 percent of its goal. The General Staff contributed \$14,438, which was 112 percent of its goal.

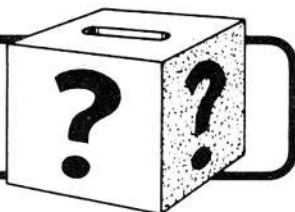
These contributions are expected to make a strong impact on the United Way campaigns in the counties in which the employees reside. For example, UCC-ND employees who live in Morgan County pledged \$13,829, which is 138 percent of that county's United Way goal. Other county contributions are: Anderson, \$234,626, 63 percent; Roane, \$56,906, 63 percent; Loudon, \$19,202, 37 percent; Knox, \$109,165, 11 percent; and other counties, \$3,923.

## Next Issue

The next issue will be dated December 19. The deadline is December 11.



# QUESTION BOX



(Continued from page 1)

time off be used to offset overtime if significant amounts are necessary over an extended period of time.

"If, however, unusual workload conditions require that all exempt employees in an entire department or group be scheduled for extra hours of work on a continuing basis over an extended period of time, it is Company policy to place these employees on an extended work schedule, which provides for additional compensation."

The unexpected workloads within the Purchasing Division required that a number of employees, exempt and nonexempt, work extra hours during the month of August. The extra effort did not include all employees and the extra time worked by individuals was variable. This was not the kind of situation that would have called for an extended workweek schedule. Whether or not compensatory time might be indicated would be determined by the management involved on a case-by-case basis.

**QUESTION:** Now that there no longer seems to be a shortage of security personnel at ORNL, would it not be practical to open the gate located in the center of the South Parking lot near the West end of Building 4508 between the hours of 7:30-8:15 a.m. for the convenience of personnel in the 3500 and 4500 building areas?

**ANSWER:** The additional guards who have been hired recently have been placed on duty to meet AEC requirements regarding the protection of special materials.

While it is recognized that a second entrance to ORNL from the south parking lot would be a convenience to a limited number of employees, it would require overtime by the Guard Department and thus will not be opened. An EXIT ONLY turnstile is available at the location mentioned for the convenience of personnel departing the Laboratory at that location.

**QUESTION:** It seems that every time a person bids on a job he gets a letter from the employment office saying he isn't qualified. When asked, "Why?", the employment office tells you that they have checked your initial application and there was no indication on the application that you had the capabilities for the job. How can one's ability be judged by this? Why doesn't management try the employee in the job for 90 days to determine if he is qualified?

There are jobs that are not put on the bid boards, such as utility operators and machine maintenance. Why not? Why is it that the guard department only asks the janitorial department and the labor department about employment opportunities. Why isn't this done throughout each plant?

**ANSWER:** The posting of a job for bidding indicates a present need for a

qualified individual to perform the work in that classification. It is not practical to provide a tryout period to determine qualifications if available information does not indicate the bidder is qualified.

Since preliminary screening is often done on the basis of information contained in an employee's personnel folder, it is important that an employee make sure his experience, education and other pertinent information is accurate and up to date. His supervisor can tell him how to go about updating his personnel records.

Each Company-Union agreement has a different bidding procedure and may exclude certain jobs from bidding or provide for filling vacancies by some other means prior to bidding. At Y-12 (to which this question apparently refers), recent vacancies in the case of stationary engineers (formerly utility operator) were filled from filter servicemen (formerly stationary engineer assistants) who were previously in the same seniority group. Another agreement provides for the promotion and broad utilization of machining classifications in the machinist seniority group so that not all machining classifications are biddable. The selection of guards is not limited to the janitorial and labor departments.

**Editor's Note:** The Question Box recently received an anonymous question concerning how one of the Credit Unions was conducting its internal affairs. The Credit Unions are independent organizations and operate free of any company affiliation or sponsorship. Any question concerning a Credit Union's activities should be directed to the Credit Union involved.

## Burch

(Continued from page 1)

Burch received his B.S. and M.S. degrees in chemical engineering from the University of Missouri at Rolla. For more than 10 years he was associated with the transuranium element production program at ORNL. He was in charge of designing the chemical processing equipment in the Transuranium Processing Plant and was project director at that facility for six years. Prior to joining Uranium Enrichment Associates, Burch headed an 18-month study which led to improvements in Laboratory waste systems.

Burch and his wife, Betty, live at 958 West Outer Drive, Oak Ridge.

### COMMUNITY CALENDAR

December 15

Art Center Film Club presents: "City Lights," Charlie Chaplin, 1924. Jefferson Junior High School, 8 p.m. Admission: Adults, \$1.75; students \$1.

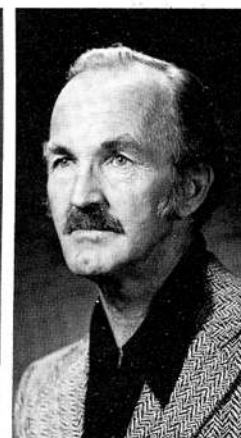
## Analytical Chemistry, Chem Tech promote three employees at ORNL



Fearnow



Gill



Lindsey

Three promotions have been announced at ORNL.

Edmund C. Fearnow, Analytical Chemistry Division, was made laboratory supervisor in the general hot analyses section of the Transuranium Processing Plant. Before joining Union Carbide in 1952, he worked at the Tennessee Eastman Corporation in Kingsport and served in the U.S. Army. He and his wife, the former Emma Lee, live at 5416 Palmetto Road in Knoxville. They have two children, Judy Faye and Ronald Lewis.

Bobby E. Gill, also of the Analytical Chemistry Division, was promoted to laboratory supervisor in the bio-organic analysis group's tobacco and health programs. Prior to his 15 years' service at Union Carbide, he attended The University of Tennessee and served in the U.S. Navy. He and his wife, the former Lois Gannon, live on Route 2 in Kingston. They have two children, Mike and Gina.

William A. Lindsey has been named process foreman in the Chemical

Technology Division's pilot plant section. A veteran of the U. S. Marine Corps, he began working for Union Carbide in 1951. He and his wife, the former Toni Summer, live on Route 7, Harriman. They have four daughters, Carol, Kay, Sharon and Emily.

## ASNT dinner meet is set December 10

The Oak Ridge section of the American Society for Nondestructive Testing will hold its regular monthly meeting, December 10, at the Alexander Motor Inn, Oak Ridge.

Guest speaker will be Larry Bryant, Los Alamos Scientific Laboratory. His subject will be "Flash Radiography."

A Dutch-treat dinner will be served beginning at 7 p.m. followed by the program at 8 p.m. For dinner reservations call one of the following before noon December 9: Fred Mundt, 483-8611, ext. 3-5265; Robert McClung, ext. 3-6283; Jim Smith, ext. 3-9303; or Cleve Porter, Knoxville 974-8814.



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